

REMARKS

Claims 1 through 41 continue to be in the case.

New claims 43 and 44 is submitted with the present amendment.

New claim 43 is based on the language of claim 1.

New claim 44 is based on the language of claim 24.

The Office Action refers to *Claim Rejections - 35 USC § 102*

8. Claims 1, 2, 9, 14-16, 20, 24, and 39-41 stand rejected under 35 U.S.C. 102(b) as being anticipated by Noye et al. (USPN 3,362,685).

According to the Office Action, Noye discloses spur gear driving arrangement, fig. 4, including a driving wheel (50) for driving said driven gear wheel (48) at an adjusted gear ratio, said chain wheel (24) and said drive gear rotatable on a common axis; and at least one of said driving and driven gear wheels having a noncircular toothed wheel configuration established relative to the pitch circle and including a plurality of rolling curve means for causing said chain wheel to have a minimum angular

velocity at a corner of said polygon and a maximum velocity at a mid-point of a straight side of said polygon while said driving wheel rotates at a constant angular velocity;

The rejection of claim 1 in view of Noye et al. is respectfully traversed.

The reference Noye et al. does not teach anywhere the polygon required according to claim 1 of the present application. The reference Noye et al. clearly directed to obtain other effects.

The reference Noye et al. clarifies in column 4, lines 14 through 43 which arrangement the reference Noye et al. teaches. The cyclical changing of the angular speed according to the reference Noye et al. is to prevent an over loading. Claim 1 of the present application does not require the cyclical changing of the angular speed for preventing an over loading.

The reference Noye et al. teaches corner regions 70, 72,74,76 with uniformly remaining tooth engagement and with an eccentricly supported pinion gear (50). Claim 1 of the present application does not require such feature. The corner regions 70, 72,74,76 of the reference Noye et al. together with an eccentricity 67 are to furnish a maximum, when the lifting wheel 42 reaches a minimum (figure 4) with its radius 68. The best solution and arrangement according to the reference Noye et al. is only then reached (reference Noye et al., column 4, lines 37 and following), when the eccentric pinion gear 50 and the corner regions 70, 72,74,76 are such tuned to each other that the minimum radius (68) of the lifting wheel (42) is mostly disposed close and nevertheless does not reach the maximum radius (62) of the pinion gear (50); according to the reference Noye et al. allegedly overloaded states of the chain are drastically reduced thereby.

In contrast, claim 1 of the present application has the purpose to prevent a jolt like motion of the chain and to assure a uniform running of the chain.

In addition claim 1 of the present application requires a certain translational ratio between the driving gear (4) and the driven gear (3). The two gear wheels (3,4) have a noncircular tooth configuration relative to the part pitch circle and comprise a number of rolling curve means and a minimum angular speed occurs at the corners of for example of a five corner polygon (figure 2 of the present application) and a maximum speed occurs in the middle of the sides of the respective polygon, which feature is not mentioned in the reference Noye et al.. Consequently, it is believed that claim 1 defines the present Invention over the reference Noye et al..

The Office Action continues that a plurality of short straight lines and a plurality of long straight lines with a long straight line adjacent an end of a short straight **line, said short straight** lines corresponding to corners of said polygon, and the pitch circle radius of said noncircular gear wheel at the middle of and short straight line is greater than the pitch circle radius at the middle of any long straight line” is; part of the teaching of the reference Noye et al.

The rejection as to claim 2 is respectfully traversed.

Since the reference Noye et al. does not teach the "polygon (29)" of claim 1 of the present application, it is not possible that the "short straight lines (29b)" and the "long straight lines (29b)" and the language "corresponding to corners (29a) of said polygon" are suggested by the reference Noye et al.. Similarly the part pitch circle (13a) and the features dependent thereof are not suggested by the reference Noye et al.

The reference Noye et al. does not anticipate claim 2 of the present application. In particular, the reference Noye et al. does not show any "long straight line" or "short straight line".

The Office Action continues that "a set gear ratio of said driving gear wheel to said driven gear wheel; " is part of the teaching of the reference Noye et al.

The rejection as to claim 9 is respectfully traversed.

Claim 9 of the present application is dependent on claim 1 of the present application and represents figures 2 and 3 of the present application. The reference Noye et al. teaches in figure 4 only a circular gear pinion (50). The "continuous rolling curves (9)" are not present in the reference Noye et al.; all outer curves of the reference Noye et al. join into each other.

In addition the reference Noye et al. does not place (not present) "rolling curve sections (9)" of the driving gear wheels (4) in a ratio to an angle (15) of the drivable gear pinion (50), since the drivable gear pinion (50) is circular. The reference Noye et al. does not contain any suggestions relating to the language of claim 9 of the present application relating to " a

set gear ratio of said driving gear to said driven gear wheel". The set gear ratio in general is the relation of the number of teeth of the gear wheels.

The Office Action continues that "a plurality of rolling curve sections and the intersection of adjacent rolling curve sections of said driven gear wheel have concave, unilaterally bent adjustment curve surfaces tangential to said rolling curve surfaces; " is part of the teaching of the reference Noye et al.

The rejection as to claim 14 is respectfully traversed.

Arc sections such as the arc "b" in figure 2 of the present application are not recognized figure 4 of the reference Noye et al.. The outer to shape of the gears according to the reference Noye et al. is smooth oval. The outer shape according to the reference Noye et al. resembles a square with round corners.

The Office Action continues that “driven gear is defined by an undulating adjustment curve surface in tangential contact at its ends to said rolling curve sections; ”

Is part of the teaching of the reference Noye et al.

The rejection as to claim 15 is respectfully traversed.

Claim 15 of the present application requires an " undulating adjustment curve surface" and this undulating adjustment curve surface is clearly absent from figure 4 of the reference Noye et al.

The Office Action continues that “undulating curve is mathematically defined as being selected from the mathematical group consisting of a polynomial of fourth order and a modified trigonometric function $x \sin x$ (inherent in disclosure); ” is part of the teaching of the reference Noye et al.

The rejection as to claim 16 is respectfully traversed.

Claim 16 refers to the mathematical relationship of the "undulating curve". Such mathematical relationship is clearly absent from the reference Noye et al..

The rejection as to claim 17 is respectfully traversed.

Claim 17 refers to a tool for production of the tooth engagement of the "driven and driving gear wheel (3,4)". The reference Noye et al. fails to refer to such tool.

The Office Action continues that "the shape of said rolling curve sections adjacent the intersection of rolling curve sections is varied over a portion of each rolling curve sections adjacent said intersection to maintain said set gear ratio." Is part of the teaching of the reference Noye et al.

The rejection as to claim 20 is respectfully traversed.

Claim 20 requires a variation of the shapes of the "rolling curve section (23)". This feature is in no way taught or suggested by the reference Noye et al., since the reference Noye et al. does not require anywhere an intersection. This implies clearly that the reference Noye et al. clearly does not reach the present invention.

The rejection as to claim 21 is respectfully traversed.

Claim 21 refers to figure 1 of the present application. No "cascading driven and driving gear wheels (3; 4)" are provided according to figure 1 of the reference Noye et al..

The rejection as to claim 24 is respectfully traversed.

The language of claim 24 refers in subsection d) to "of said corners of said polygon (29)". This feature is clearly lacking in the reference Noye et al.. Consequently the reference Noye et al. is not suitable as a comparison with the present Invention.

The rejection as to claim 37 is respectfully traversed.

Claim 37 of the present application requires a mathematical formula. This mathematical formula is nowhere suggested in the reference Noye et al.. In addition the features of "polygon corners (29a)" and of "rolling curves" are not present in the Noye et al. reference. Instead the reference Noye et al. teaches a square with rounded lobes.

The rejection as to claim 39 is respectfully traversed.

Claim 39 of the present application requires the presence of a polygon. The reference Noye et al does not teach a polygon at the tooth

engagement of a gear wheel. Therefore a combination with a round steel chain is not suggested in the reference Noye et al..

The rejection as to claim 40 is respectfully traversed.

Claim 40 of the present application requires outwardly shifted polygons (29). These outwardly shifted polygons are not known from the Noye et al. reference, in particular since the reference Noye et al. does not teach any polygons.

The rejection as to claim 41 is respectfully traversed.

The particular features of claim 41 of the present application are clearly absent from the reference Noye et al. already for that reason that the reference Noye et al. does not teach any polygons.

In conclusion applicant submits that a triangle cannot be employed as a polygon in connection with the Noye et al. reference. No polygon is shown in the figures of the reference Noye et al..

Reconsideration of all outstanding rejections is respectfully requested.

All claims as presently submitted are deemed to be in form for allowance and an early notice of allowance is earnestly solicited.

Respectfully submitted,

Jorg Oser

By: *Horst M. Kasper*
Horst M. Kasper, his attorney,
13 Forest Drive, Warren, N.J. 07059
Tel.:(908)526-1717 Fax:(908)526-6977
Reg. No. 28,559; Docket No.: FLA204

rep/am/mm